

## Stephen Cauffman

---

**From:** wtc@nist.gov  
**Sent:** Monday, September 08, 2008 4:55 PM  
**To:** Stephen Cauffman  
**Subject:** Fw: World Trade Center Collapse - A Probable Cause

X-Sieve: CMU Sieve 2.3

**From:** Shyam Sunder <sunder@nist.gov>  
**To:** "wtc@NIST.gov" <wtc@nist.gov>  
**CC:** "terri@nist.gov" <terri@nist.gov>, "wgrosshandler@nist.gov" <wgrosshandler@nist.gov>, "rgann@nist.gov" <rgann@nist.gov>, "jgross@nist.gov" <jgross@nist.gov>, "fahim.sadek@nist.gov" <fahim.sadek@nist.gov>, Stephen Cauffman <cauffman@nist.gov>

**Date:** Wed, 27 Aug 2008 05:22:41 -0400  
**Subject:** Fw: World Trade Center Collapse - A Probable Cause  
**Thread-Topic:** World Trade Center Collapse - A Probable Cause  
**Thread-Index:** AckICoYndcJyc+rdRwydPwwRiyIVQgAG+5Nk  
**Accept-Language:** en-US  
**X-MS-Has-Attach:**  
**X-MS-TNEF-Correlator:**  
acceptlanguage: en-US  
**X-NIST-MailScanner:** Found to be clean  
**X-NIST-MailScanner-From:** sunder@nist.gov  
**X-NIST-MailScanner-Information:**

---

**From:** Eli rubinstein  
**To:** Shyam Sunder  
**Cc:** Alan Cantor  
**Sent:** Wed Aug 27 02:06:33 2008  
**Subject:** World Trade Center Collapse - A Probable Cause  
Dr. Shyam-Sunder, Director, BFRL

Your 8-21-08 news conference on the 7 WTC final report states conclusively that neither jet-fuel fires nor explosive charges were causes of collapse. One probable cause that does not appear to have been considered in all this time is the role of concrete foundations interacting with the steel columns imbedded in them.

Consider the following:

1. The collisions interrupted power to many machines, with some conductors shorting out to the steel structural columns supporting them.
2. Emergency generators started up in response, electrifying these columns.
3. At the foundation/steel interface, the concrete (a semi-conductor) between columns would provide high resistance loads while the generators were running.

4. Concrete heating would cause the imbedded steel to melt and cause building collapse.

This scenario is supported by the following facts:

1. Diesel fuel on hand was sufficient to keep the generators running for some time.
2. Approximately 5 KW delivered to one cubic foot of concrete for 45 minutes would cause it to soften/melt/reach 2800 degrees F. (Based upon: the KW levels available; the specific heats and resistivities of concrete and steel; the melting point of steel; the density of concrete; and distances between columns.)
3. Cherry-red masses of metal seen in photographs of the rubble shortly after collapse.
4. Time intervals from airplane impact to building collapse as concrete heated. (45 and 80 minutes for first two towers; 7 hours for 7 WTC).
5. Collapse of 7 WTC starting at the bottom of the building.

I believe it would be appropriate for applicable codes to be amended to call for emergency generators to sense and shut down when their output is not being received by the loads they were provided for.

The courtesy of a reply is requested.

Eli Rubinstein, BME retired  
7900 Old York Road Apt 707A  
Elkins Park, PA 19027-2328